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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
PARKER, BRANDI P	
ART UNIT	PAPER NUMBER
3624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/735,080	OUIMET, KENNETH J.	
	Examiner	Art Unit	
	BRANDI P. PARKER	3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/9/3009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The following is a Non-Final Office Action re-opening prosecution of the application in response to Applicant's filling of an Appeal Brief on 3/9/2009. The Final Office Action dated 9/22/08 is withdrawn.

2. Claims 1-23 are pending.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-16 and 21-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

5. Based on Supreme Court precedent and recent Federal Circuit decisions, in order for a method to be considered a "process" under §101, a claimed process must either: (1) be tied to a machine or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. *In re Bilski et al,* 88 USPQ 2d 1385 CAFC (2008). *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972). If neither of these requirements is met by the claim, the method is not a patent eligible process under §101 and is non-statutory subject matter.

6. Claims 1 and 21 are directed towards a method of computing decisions for a set of decision variables. As the claims are not sufficiently tied to an apparatus, such as a computer, and/or do not transform the underlying subject matter (from your claim) to a different state, the claimed method is non-statutory and therefore rejected under 35 U.S.C. 101.

7. Whether a method appropriately includes particular machines to qualify as a section 101 process may not always be a straightforward inquiry. As Comiskey recognized, "the mere use of the machine to collect data necessary for application of the mental process may not make the claim patentable subject matter." *In re Comiskey*, 499 F.3d 1365, 1380 (Fed. Cir. 2007), (citing *In re Grams*, 888 F.2d 835, 839-40 (Fed. Cir. 1989)). In other words, nominal or token recitations of structure in a method claim should not convert an otherwise ineligible claim into an eligible one. *Ex parte Langemyr* (BPAI 2008-1495, 2008).

8. In this case, Applicant failed to identify a particular processor or machine that implements the method of computing decisions.

9. Claims 2-16 and 22-23 are rejected for being dependent upon rejected claims 1 and 21.

Examiner's Notes

10. The Examiner has pointed out particular references contained in the prior art of record within the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply. Applicant, in preparing the response, should consider fully the entire reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 1-10, 15-20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouimet (US 2002/0107819) in view of "Application of Linear Decomposition Technique in Reliability-Based Structural Optimization", by F. Jensen and P.Thoft-Christensen.

13. With respect to claim 1, Ouimet teaches in a planning model characterizing an enterprise, a method of computing decisions in a computing environment for a set of decision variables comprising:

a. generating a planning function describing said planning model, said planning function depending upon said set of decision variables (paragraph 0031);

b. and presenting an outcome of an optimizing operation at an output section of said computing environment, said outcome indicating obtained decisions (paragraph 0053).

Although Ouimet teaches optimizing the planning model, including the planning function (paragraph 003), Ouimet does not directly teach the optimization of the planning function after the separation of the planning function into independent planning functions that depend upon different ones of decision variables. However, the F. Jensen and P.Thoft-Christensen article teaches:

c. separating said planning function into independent planning functions, each of said independent planning functions depending upon different ones of said set of decision variables (pg. 1-2, regarding dividing the original optimization problem into smaller optimization or subproblems);

d. independently optimizing each of said independent planning functions in said computing environment to obtain said decisions for said different ones of said set of decision variables (pg. 2, regarding subproblems being optimized

independently; pg. 3, regarding subproblems having different constraints and different optimization variables);

It would have been obvious to one of ordinary skill in the art to include the business system of Ouimet with the ability to separation of the planning function into planning functions that depend upon different ones of decision variables as taught by the F. Jensen and P.Thoft-Christensen article since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

14. Regarding claim 2 and 22, the F. Jensen and P.Thoft-Christensen article further teaches wherein said planning function to be a non-linear, function of at least one of said decision variables (pg. 2).

15. As to claim 3, Ouimet further teaches wherein said non-linear function is continuous (paragraph 0114).

16. With respect to claim 4, Ouimet further teaches wherein said non-linear function is discontinuous (paragraph 0145).

17. As to claim 5, Ouimet further teaches:

e. wherein said planning model incorporates a primary objective and a strategic objective of said enterprise; said method further comprises (paragraph 0084):

f. defining a primary objective function describing said primary objective, said primary objective function including said set of decision variables (paragraph 0084); and

g. defining a strategic objective function describing said strategic objective, said strategic objective function including a subset of said decision variables (paragraph 0084); and

h. said generating operation incorporates said primary objective function and said strategic objective function within said planning function (paragraph 0010).

18. Regarding claim 6. Ouimet further teaches:

i. specifying a plurality of values for a strategic factor, said strategic factor being configured to adjust an influence that said strategic objective has on said planning model (paragraph 0032, regarding the weighting factor applied to the strategic objective); and

j. coupling said strategic objective function with said strategic factor (paragraph 0032).

19. With respect to claim 7, Ouimet further teaches a method as claimed in claim 6 wherein said independently optimizing operation optimizes said independent planning functions for each of said values of said strategic factor (paragraph 0032).

20. Claim 19 combines claim 6 and 7 and stores the method on a computer-readable storage medium. Therefore, claim 19 is rejected under the same rationale as claims 6 and 7.

21. As to claims 8-9 and 20, Ouiment teaches the capability of having multiple objective functions and strategic factors present in the optimization analysis (paragraph 0026). The addition of factor the second function and strategic is a mere duplication of the claimed method in the aforementioned claims. According to *In re Harza*, mere duplication of parts has no patentable significance unless new and unexpected results are produced. 214 USPQ 378 (CCPA 1960).

22. Regarding claims 10 and 18, Ouimet further teaches a method as claimed in claim 1 wherein said independently optimizing operation comprises selecting an optimization algorithm from a group comprising a closed form solution, a one dimensional maximization of continuous decision variables, a one dimensional maximization of discrete Variables, and a general multidimensional method (paragraph 0071).

23. As to claim 15, Ouimet further teaches wherein said presenting operation comprises providing said decisions for said different ones of said set of decision variables that optimize said each of said independent planning functions (paragraph 0053).

24. With respect to claim 16, Ouimet further teaches wherein said presenting operation comprises providing a plurality of scenario points, each of said plurality of scenario points being associated with said decisions for said decision variables that optimize said each of said independent planning functions (paragraph 0011-0013, regarding pricing scenarios).

25. Claim 17 combine claims 1 and 5 and places the executing instructions on a computer-readable storage medium. Therefore, claim 17 is rejected on the same rationale as claims 1 and 5 as provided above.

26. Claims 11-14, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouimet (US 2002/0107819) and "Application of Linear Decomposition Technique in Reliability-Based Structural Optimization", by F. Jensen and P.Thoft-Christensen, in further view of Ouimet (US 6308162) (Ouimet II)

27. With respect to claims 11 and 23, Ouimet in view of the F. Jensen and P.Thoft-Christensen article teaches a method as claimed in claim 1. Ouimet teaches:

k. defining a primary objective function describing said primary objective, said primary objective function including said set of decision variables, and said generating operation incorporating said primary objective function within said planning function (paragraph 0084); and

The F. Jensen and P.Thoft-Christensen article teaches

l. determining a coupling between said decision variables in said primary objective function; introducing an embedded constraint into said primary objective function (pg. 2, regarding development of connections between variables); and

Ouimet in view of the F. Jensen and P.Thoft-Christensen article does not directly teach introducing an embedded constraint into the primary objective function and performing and optimization while concurrently satisfying the embedded constraint. However, Ouimet II teaches:

m. introducing an embedded constraint into said primary objective function (column/line 2/15-27); and

n. following said introducing operation, performing said independently optimizing operation to optimize said primary objective function while concurrently satisfying said embedded constraint (column/line 2/37-42).

It would have been obvious to one of ordinary skill in the art to include the business system of Ouimet in view of the F. Jensen and P.Thoft-Christensen article with the ability to introducing an embedded constraint into the primary objective function and performing and optimization while concurrently satisfying the embedded constraint as taught by Ouimet II since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

28. With respect to claim 12, Ouimet II further teaches A method as claimed in claim 11 wherein said introducing operation comprises:

o. including an embedded constraint variable for said embedded constraint in said primary objective function (column/line 2/15-42); and

p. defining an embedded constraint function to include said embedded constraint variable (column/line 2/15-42);

q. said generating operation comprises constructing said planning function by combining said primary objective function and said embedded constraint function (column/line 2/15-42); and

r. said independently optimizing operation comprises providing said decisions which optimize said primary objective function while concurrently satisfying said embedded constraint function (column/line 2/15-42).

29. Regarding claim 13, Ouimet II further teaches a method as claimed in 12 further comprising:

s. specifying a plurality of values for a constraint factor, said constraint factor being configured to adjust an influence that said embedded constraint has on said planning model; and coupling said embedded constraint function with said constraint factor (column/line 2/15-42).

30. As to claim 14, Ouimet II further teaches a method as claimed in claim 13 wherein said independently optimizing operation optimizes said independent planning functions for each of said values of said constraint factor (column/line 2/15-42).

31. Claim 21 is a combination of claims 1 and 11 is therefore rejected under the same rationale provided for the rejection claims 1 and 11.

32. Claim 23 combine claims 12-14 and is therefore rejected under the same rationale provided for the rejection of claims 12-14.

Conclusion

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDI P. PARKER whose telephone number is (571) 272-9796. The examiner can normally be reached on Mon-Thurs. 8-5pm.

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bradley B. Bayat can be reached on (571) 272-6704. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

35. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRANDI P PARKER/
Examiner, Art Unit 3624

/Bradley B Bayat/

Supervisory Patent Examiner, Art Unit 3624